CLAIMS

1. Method for detection of a shielding fault in a multiwire cable forming part of a communication network, during functional operation of the said network, the said cable (10) transferring a multiframe signal S(t), characterized in that it comprises the following steps:

- a disturbing signal I(t) is injected into the said cable through an injection clamp (14) for a determined time T,
- when an item of equipment (12) receives the signal S(t), the number N of frames in fault during the injection period of the disturbing signal I(t) is counted,
- it is decided that there is a shielding fault in this cable if $N/T \leq TEP_{max}$, where TEP_{max} is the maximum packet error rate to be guaranteed.

2. Method according to claim 1, in which TEP_{max} is equal to 0.

3. Method according to any one of the above claims, in which the communication network is an Ethernet network.

4. Method according to any one of the above claims, in which N is the number of error frames, that in particular includes CRC errors, frames that are too short, and missing frames.

5. Method according to any one of the above claims, in which the number N is included in the MIB part for different network equipment (11, 12).

6. Method according to any one of the above claims, in which the following relation is true: $\frac{I1}{ATT_{\min}} < I < \frac{I1}{ATT_{\max}}$, where:

- I1: the level of the disturbing signal I(t) that disturbs the signal S(t) if there is no shielding protection,
- ATT_{min}: the minimum attenuation of the shielding necessary for the disturbance induced under the shielding to be less than I1, taking account of the expected maximum external aggression,
- ATT_{max}: normal attenuation of the shielding.

7. Method according to any one of the above claims, in which the disturbing signal I(t) is similar to the signal S(t) transferred on the cable.

8. Method according to any one of the above claims, in which the disturbing signal I(t) has at least one frequency previously identified as particularly disturbing the signal S(t).